# **Email Delivery Optimizer – User Guide**

## **Introduction**

Welcome to the Email Delivery Optimizer. This tool helps individuals and small teams ensure their emails are properly authenticated and delivered. It offers multiple interfaces—Web, Desktop GUI, and Command Line—so you can use it however you're most comfortable.

## **System Requirements**

* Python 3.8+
* Gmail account with App Password enabled
* Internet connection (for DNS and IMAP/SMTP interactions)

## **Installation**

### **1. Clone the Repository**

git clone https://github.com/yourusername/email-delivery-optimizer.git

cd email-delivery-optimizer

### **2. Create and Activate Virtual Environment**

python -m venv venv

# Windows:

venv\Scripts\activate

# macOS/Linux:

source venv/bin/activate

### **3. Install Dependencies**

pip install -r requirements.txt

### **4. Configure Gmail App Password (Optional)**

Create a .env file in the config/ folder:

GMAIL\_USER=youremail@gmail.com

GMAIL\_APP\_PASSWORD=yourapppassword

⚠️ Do not use your Gmail main password. Use [App Passwords](https://myaccount.google.com/apppasswords).

## **Modes of Use**

### **1. Web Interface**

#### **Start the App:**

python run.py

Open browser at: http://localhost:5000

#### **Features:**

* **/ (Home)**: Enter domain + DKIM selector → View SPF/DKIM/DMARC
* **/email**: Send a styled HTML travel email from your Gmail
* **/analyze**: Log into Gmail → Fetch & analyze headers of latest email

### **2. Desktop GUI**

#### **Launch GUI:**

python gui/gui\_app.py

#### **Features:**

* Domain authentication check
* Send HTML email
* Analyze recent received email

### **3. Command-Line Tool**

#### **Usage:**

python main.py --mode [check|send|analyze] [options]

#### **Examples:**

python main.py --mode check --domain example.com --selector default

python main.py --mode send --to user@example.com --file email.json

python main.py --mode analyze --email you@gmail.com --password app\_password

## **Understanding Email Terms**

|  |  |
| --- | --- |
| **Term** | **Description** |
| SPF | Ensures that sending mail servers are authorized to send emails for your domain |
| DKIM | Attaches a digital signature that verifies the sender and message integrity |
| DMARC | Policy that tells mailbox providers how to handle unauthenticated mail |
| IMAP | Protocol to read received emails (used for header analysis) |
| SMTP | Protocol to send emails (used in send functionality) |

## **Troubleshooting**

### **Emails Not Sending**

* Ensure App Password is correct
* Check internet connectivity
* Gmail may block less secure apps (use App Passwords only)

### **Analysis Doesn't Work**

* Make sure recent email was received
* Subject filter may not match
* Gmail may require re-authentication

### **DNS Records Not Found**

* SPF/DKIM/DMARC may not be published
* Check with domain registrar or DNS provider

## **Tips for Best Use**

* Keep your .env file secure and gitignored
* Always use HTML-safe inputs
* Validate SPF/DKIM/DMARC after every DNS update
* Send a test email and analyze it to verify deliverability

## **Roadmap**

* PDF report generation
* Auto-detection of selector from headers
* Integration with other providers (Outlook, Zoho)

## **Contact & Support**

For bugs, issues, or feature requests, raise an issue on GitHub

Thank you for using Email Delivery Optimizer!